501876513 04/03/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
Bertil BERGGREN	02/17/2012
Staffan NORRGA	03/13/2012
Tomas U. JONSSON	02/24/2012

RECEIVING PARTY DATA

Name:	ABB RESEARCH LTD.
Street Address:	Affolternstrasse 44
City:	Zurich
State/Country:	SWITZERLAND
Postal Code:	CH-8050

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13395359

CORRESPONDENCE DATA

Fax Number: (703)205-8050 Phone: 703-205-8000

Email: mailroom@bskb.com, yolanda.askew-sampson@bskb.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

Correspondent Name: BIRCH, STEWART, KOLASCH & BIRCH, LLP

Address Line 1: P.O. BOX 747

Address Line 4: FALLS CHURCH, VIRGINIA 22040-0747

ATTORNEY DOCKET NUMBER:	6046-0133PUS1	
NAME OF SUBMITTER:	paul c. lewis	

Total Attachments: 6

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PATENT REEL: 027981 FRAME: 0375 \$40.00 133953

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PATENT REEL: 027981 FRAME: 0376

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ATTORNEY DOCKET NO. 6046-0133PUS1

BIRCH, STEWART, KOLASCH & BIRCH, LLP

UNITED STATES PATENT RIGHTS, OR UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

ASSIGNMENT

Application No	To. <u>13/395,359</u>	Filed	March 9, 2012
Insert Name(s) of Inventor(s)	***(Given Name FAMILY NAME	(ALL CAPS))	***
51 12 (WHEREAS, Bertil BERGGREN, Staffan N undersigned) has (have) invented certain nev	ORRGA, T w and usefu	omas U. JONSSON (hereinafter designated as the l improvements in:
Insert Title of Invention	FAULT CURRENT LIMITATION IN DC POWER TRANSMISSION SYSTEMS		ANSMISSION SYSTEMS
	for which an application for Letters Patent undersigned (except in the case of a provision	of the Unonal applica	ited States of America has been executed by the tion)
Insert Date	OnFebruary 17, 2012		; and
of Signing of Application Insert Name of Assignee Insert Address of Assignee	WHEREAS, ABB RESEARCH LTD. of Affolternstrasse 44, CH-8050 ZÜRICH, S	Switzerland	
CHECK BOX IF APPROPRIATE	its heirs, successors, legal representatives an of acquiring the entire right, title and interest that may be granted therefor in the United Star in any foreign countries.	st in and to	nereinafter designated as the Assignee) is desirous said invention and in and to any Letters Patent(s) erica and
a rationidale	the undersigned has (have) sold, assigned a transfer unto said Assignee the full and ex America, its territories, dependencies and po and all Letters Patent(s) which may be gran dependencies and possessions, and if the box	and transfe colusive rigossessions a nted therefor above is o	ion, the receipt of which is hereby acknowledged, and by these presents does sell, assign and ht to the said invention in the United States of and the entire right, title and interest in and to any in the United States of America, its territories, designated, in any and all foreign countries; and to ions and extensions thereof for the full term or

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terms for which the same may be granted.

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ATTORNEY DOCKET NO. 6046-0133PUS1

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional, conversion or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation, division, conversion or reissue thereof or Letter Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agree(s) to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States of America patent(s) or a grant of a valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorize(s) and request(s) the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patents resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the law firm of Birch, Stewart, Kolasch & Birch, LLP the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

The undersigned hereby covenant(s) that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date	2012-02-17	Name of Inventor	
Date		Name of Inventor	(signature) Staffan NORRGA
Date		Name of Inventor	
Date		Name of Inventor	(signature)
Date		Name of Inventor	(signature)
Date		Name of Inventor	(signature)

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UNITED STATES PATENT RIGHTS, OR UNITED STATES PLUS ALL FOREIGN PATENT RIGHTS

ASSIGNMENT

Application No	o. 13/395,359	Filed	March 9, 2012	
Insert Name(s) of Inventor(s)	***(Given Name FAMIL	Y NAME (ALL CAPS))	***	
,	WHEREAS, Bertil BERGGREN, Staundersigned) has (have) invented cert	affan NORRGA, T tain new and usefu	omas U. JONSSON (hereinafter il improvements in:	designated as the
Insert Title of Invention	FAULT CURRENT LIMITATION II	N DC POWER TR	ANSMISSION SYSTEMS	
	for which an application for Letters undersigned (except in the case of a p	Patent of the Un provisional applica	ited States of America has been tion)	n executed by the
Insert Date of Signing of	On March 13	3, 2012		; and
Application Insert Name of Assignee	WHEREAS, ABB RESEARCH LTI	D.		
insert Address of Assignee	of Affolternstrasse 44, CH-8050 ZÜR	CICH, Switzerland		
CHECK BOX F APPROPRIATE	its heirs, successors, legal representate of acquiring the entire right, title and that may be granted therefor in the Un in any foreign countries.	interest in and to	said invention and in and to any	iignee) is desirous / Letters Patent(s)
. 7. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	NOW, THEREFORE, for good and verthe undersigned has (have) sold, ass transfer unto said Assignee the full America, its territories, dependencies and all Letters Patent(s) which may dependencies and possessions, and if any and all divisions, reissues, contact terms for which the same may be grant.	signed and transfe and exclusive rig and possessions a be granted therefo the box above is of inuations, conversi	rred, and by these presents doe ght to the said invention in the and the entire right, title and inte or in the United States of Ameri designated, in any and all foreign	s sell, assign and United States of crest in and to any ica, its territories,

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The undersigned agree(s) to execute all papers and documents and to perform any act which may be necessary in connection with claims or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States of America and any foreign patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorize(s) and request(s) the Patent and Trademark Office Officials in the United States of America and in any foreign countries to issue any and all Letters Patents resulting from said application or any continuing, divisional conversion or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

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In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date,	Name of Inventor	
Date March 13, 2012,	Name of Inventor	(signature) Bertil BERGGREN (signature) Staffan NORRGA
Date,	Name of Inventor	
		(signature) Tomas U. JONSSON
Date,	Name of Inventor	
		(signature)
Date,	Name of Inventor	(rice church
		(signature)
Date,	Name of Inventor	
		(signature)

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ATTORNEY DOCKET NO. 6046-0133PUS1

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ASSIGNMENT

	12/205 250		Ml. 0. 0040	
Application No	13/395,359	Filed	March 9, 2012	
Insert Name(s) of Inventor(s)	***(Given Name FA)	MILY NAME (ALL CAPS))*	***	
or (o,	WHEREAS, Bertil BERGGREN, undersigned) has (have) invented		omas U. JONSSON (hereinafter designated as th l improvements in:	ıe
Insert Title Invention	FAULT CURRENT LIMITATION	N IN DC POWER TR	ANSMISSION SYSTEMS	
	for which an application for Lett undersigned (except in the case of		ited States of America has been executed by th	ıe
Insert Date Signing of	On Febru	ary 24, 2012	; an	ıd
Application Insert Name WHEREAS, ABB RESEARCH LTD. of Assignee				
Insert Address of Assignee	of Affolternstrasse 44, CH-8050 Z	ÜRICH, Switzerland		
СНЕСК ВОХ	of acquiring the entire right, title a that may be granted therefor in the	and interest in and to	nereinafter designated as the Assignee) is desirous said invention and in and to any Letters Patent(serica and	ıs s)
IF APPROPRIATE	in any foreign countries.			
	the undersigned has (have) sold,	assigned and transfer	ion, the receipt of which is hereby acknowledged red, and by these presents does sell, assign an ht to the said invention in the United States of	ıd

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has (have) sold, assigned and transferred, and by these presents does sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America, its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America, its territories, dependencies and possessions, and if the box above is designated, in any and all foreign countries; and to any and all divisions, reissues, continuations, conversions and extensions thereof for the full term or terms for which the same may be granted.

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Page 1 of 2

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In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date _		Name of Inventor	
			(signature) Bertil BERGGREN
Date _		Name of Inventor	
			(signature) Staffan NORRGA
Date _	2012-02-27	Name of Inventor	
			(signature) Tomas U. JONSSON
Date _		Name of Inventor	
			(signature)
Date _		Name of Inventor	(signature)
			(signature)
Date _		Name of Inventor	.
			(signature)

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